# The
# Red Book

For
Builders
and
Plasterers

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MILLER LUMBER CO.

# THE RED BOOK

An Hand Book of Useful Information for the Building and Plastering Trade—Including Ready Reference Table of Wall Measurements

Especially Dedicated to our Friends and Endorsers among Architects, Contractors and Plasterers

Published by

**United States Gypsum Company**

CHICAGO CLEVELAND MINNEAPOLIS

Makers of Modern
Hard Wall Plasters

# WHAT HARD WALL PLASTERS ARE:

Briefly stated "Hard Plasters" are made from "Plaster of Paris"—calcined gypsum rock—instead of from slaked lime.

They are rightly named—if the goods are properly made and the material pure—as **they set very hard.** Their "tensile strength" is much greater than lime.

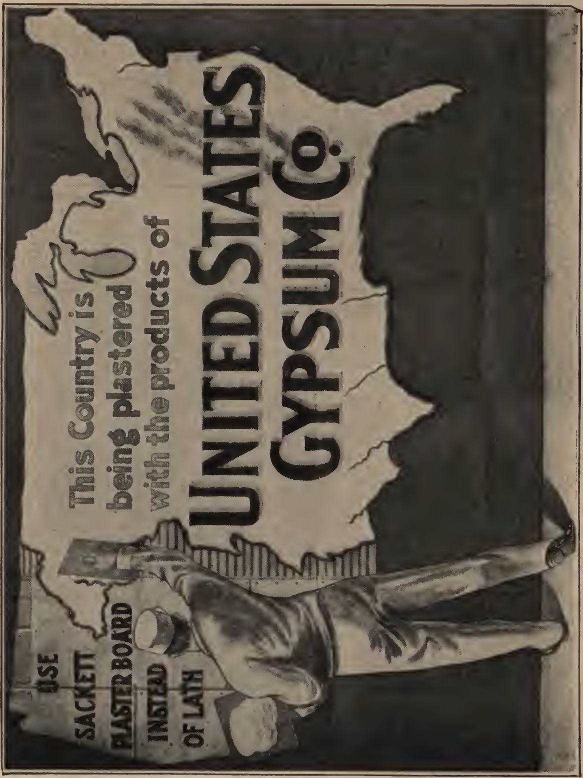
**Our** Hard Plasters make a wall **ten times stronger** than the best lime plastered wall. And they set up in about two hours' time—**regardless of the weather**—drying out very quickly. They do not require so much water as lime does in the mixing, to begin with. Part of the water dissolves into gases on contact with the gypsum and starts "crystallization"—the **natural mechanical process** of "setting up" or hardening. As the gypsum crystals form and unite, they **squeeze the surplus water out** to the surface of the wall—where it evaporates in short order. Just like the action of a clothes wringer.

These two points—tensile strength and quick setting and drying—mean **strong walls** and **rapid building**—the two things most important in modern building.

These are the particular features—although there are a host of other advantages resulting from them, which make our Hard Plasters so different from, and so much better than, the old fashioned lime and sand method of plastering.

These facts are recognized and appreciated from a practical standpoint today by the large majority of the better class of architects, contractors, plasterers and builders.

**Fully 75 per cent of the Better Class of Buildings today are plastered with our Hard Wall Plasters.**


This Country is being plastered with the products of
UNITED STATES GYPSUM Co.
USE SACKETT PLASTER BOARD INSTEAD OF LATH

A reduced reproduction of our freight car sign—a striking design lithographed in three colors on a poster three feet high by three and a half feet wide. Whenever you see one of these posters on the side of a car in the freight yards, on a side track or in a moving train, you may know it is one of the 50,000 cars that leave our mills every year, bearing over a million tons of our several brands of modern Hard Wall Plasters to progressive builders all over the United States.

# HIGHEST APPROVAL OF SCIENTISTS AND EXPERTS.

GOLD MEDAL GRAND PRIZE.
ONE-HALF ACTUAL SIZE.

The country affords no higher court of criticism and approval, from a **scientific** standpoint, than the renowned chemists, geological experts, mining engineers and other experts composing the Committee on Awards that decided our right to this prize in open competition with the world.

We are proud of this medal. It marks us as Past Masters in the art of plaster making. It indicates that we not only have succeeded in satisfying the most exacting demands of excellence, but are able and willing to give the plaster consuming trade just a little more for its money—in quality—than is really required.

This Grand Prize puts the permanent, indelible stamp of unquestioned superiority on United States Gypsum Company's products. All doubt and uncertainty are removed. It gives you absolute confidence in your selection of plastering materials.

U.S. GYPSUM CO.
PRODUCTS
AWARDED
GRAND PRIZE

# WHY OUR BRANDS ARE SUPERIOR

We build them on the sure foundation of pure raw material. We possess our own gypsum mines. They are conceded to be the finest gypsum properties operated — the deepest, widest and purest ledges of solid Rock Gypsum. The two cuts on this page will give you a faint idea of their extent and purity.

We are pioneers in the Hard Mortar industry, having been at it nearly twenty years. Ample time to subject our goods to the most rigid tests—both in our chemical labratories and experimental departments—and in actual service. We have grown in experience—studied closely the requirements of the building trade—perfected our formulas and mechanical equipment. We have kept abreast of the times—and just a little ahead. We are thoroughly modern, as well as pioneers.

All our workmen—from labratory chemists and calcining experts to ordinary mill hands—have grown up in the business. They have made Hard Plaster their life study—and there's plenty to learn about it, too. Every detail — mining, crushing, calcining, retarders, mixing, etc.—receives the same expert, skillful treatment—the same painstaking care. No guesswork, no carelessness, no weakness at any point. We know what we are doing, and we do it right. The logical result is **perfect** hard plasters – **superior goods.**

# WE SATISFY YOUR NEEDS

Tell us your wants—your local building conditions—your views and preferences in the plastering line, and we can surely meet your requirements.

We make White Plasters, Gray Plasters, Neat Goods, Mixed Goods, Wood Fibre Plasters, Plaster of Paris (Stucco) Finishing Plasters, Fibred and Unfibred Plasters, Moulding Plasters, Wall Finishes—everything needful to make, finish or decorate a plastered wall or ceiling.

We make not one brand, but several—all high grade, but from different formulas to suit different tastes and requirements. No occasion for anyone—architect, contractor, plasterer or builder—having to go outside of our line to be satisfied.

Our Plasters are furnished in three general classes:

## Cement Plasters

The "neat" or unsanded goods. These brands are probably the largest sellers—being for use where good sand is available at reasonable cost, and where the trade prefers to sand its own mortar at the job.

## Prepared Plasters

Machine mixed—the several ingredients—cement, sand, etc.—being automatically distributed with relentless uniformity. There can be "guesswork" mortar—no streaks of sand or spots of unevenness in setting up or in tensile strength on the wall—with our Prepared Goods. And no chance of poor sand, either. Nothing but sharp, clean Silica sand, properly graded and screened, and thoroughly dry. And in right proportions, too—no guesswork about that. These goods are extremely popular in many sections, where their convenience and time-saving are fully appreciated, as well as the confident assurance of perfect results in the application and on the wall.

## Wood Fibre Plasters

Machine mixed also—all ready to apply, except the water. The sand, however, is replaced by finely shredded wood fibre, making these goods lighter, more bulky than the neat cement and the Prepared Goods.

The woody nature of these goods makes them unusually **tough** and **elastic**—and gives them a very smooth and "fatty" nature, making them especially easy for the mechanic to apply. They spread exceedingly well and are economic in application, in many ways. Our Wood Fibre Plasters are rapidly gaining popularity.

All of these things are fully set forth in the illustrated literature describing our several brands—which we will gladly send on request.

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Here is a good motto for you to remember in considering our plastering materials: "If you don't see what you want, ask for it." We are always open for suggestions from the trade, and take pleasure in answering inquiries.

# THE ADVANTAGES OF OUR HARD WALL PLASTER

Our plaster adheres equally well to lath, Sackett plaster board, brick or other surfaces and will last as long as the building.

It will not loosen or fall off, even from leakage of water pipes or imperfect roofs.

It permits the carpenters to follow the plasterers without loss of time.

It is a valuable fire retarder, as the most intense heat will not cause it to fall off and expose the woodwork to the fire.

It has great adhesiveness and strength, rendering the walls practically indestructible.

It will not crack of itself or shrink.

Rats or vermin cannot find harborage owing to its density and extraordinary hardness.

It is disease-germ proof.

From its possessing a smooth, hard surface it is admirable for decorative purposes.

From its great density the building is made warmer in winter and cooler in summer.

Its use prevents shrinking and cracking of woodwork, as it requires about one-third the amount of water used in applying lime.

It costs no more than three-coat lime work and is infinitely better.

Its use saves weeks in time necessary to plaster a building.

It is plastic, works smoothly, and any competent mechanic can apply it.

# GENERAL REQUIREMENTS

**(Applying to any of our brands—neat, mixed or wood fibre.)**

**Lath**: Use a good grade of wood lath—free from sap or bark. Green lath are best; full seasoned lath are too dry. Must be well nailed. Not less than four 3 d common nails to each 4 ft. lath, driven well home.

**Double** nailing is occasionally resorted to, on very particular jobs, especially if the lath are not up to standard in quality and condition.

Break joints every fifth lath, and do not permit ends of lath to touch.

**Beware of Dry Lath**; they cause much trouble. A good rule is to **thoroughly soak** the lath three hours or so before using—or better still, the night before, then sprinkle them twenty minutes before using. This is positive insurance against lath cracks.

## Key or Clinch

Lath to be spaced ¼ inch apart, on walls and ceiling. Farther apart may mean loss of material—closer together may not allow for swelling of lath, thus causing buckling. Therefore the standard ¼-inch key is a good rule to follow, and greatly simplifies the problem of lathing.

**SPECIAL NOTE.**—A still better way to simplify the lathing problem, is not to use lath at all, but use **Sackett Plaster Board** instead. It saves much time, reduces lathing expense to a minimum and has many other advantages. Write us, or ask your dealer, for further particulars concerning this modern, 20th Century method of lathing—**Sackett Plaster Board.**

## Grounds

For wood lath should be ¾-inch; on brick walls ½-inch; on wire lath ¾-inch; on Sackett Plaster Board ¾-inch.

## The Mixing Box

Use a clean, tight box, about 3 x 6 feet, with slanting ends. The best mixing box is of galvanized iron with curved ends. Such a box does not leak or absorb water, and is easily kept clean. The first batch mixed in a wooden box, which has become perfectly dry, has caused many a good batch of plaster to be condemned. The dry boards and cracks take the water out of the mortar and the little particles of dry plaster sticking to the sides start crystallization and cause your mortar to set too quick.

Elevate one end of mixing box three or four inches.

Standard Specifications, Directions and Suggestions for Handling, Mixing and Applying United States Gypsum Brands of Hard Wall Plasters.

# UNITED STATES GYPSUM COMPANY'S BRANDS OF CEMENT PLASTER.

ALABASTER

BAKER

ELDORADO

FLINT

GRANITE

IMPERIAL

IVORY

ROCK

ZENITH

# MIXING AND APPLICATION

## CEMENT PLASTERS

Our Cement Plasters are unsanded. **For Base Coat on Wood Lath** mix **two** parts of clean, sharp, dry sand with **one** part of Plaster.

**For Base Coat on Brick or Tile** the proportion is **three** parts sand to one of Plaster.

**For Base or Scratch Coat on Wire or Metal Lath** mix **two** parts clean, sharp sand with **one** part Plaster.

**For Base Coat on Sackett Plaster Board** mix **two** parts clean, sharp, dry sand with **one** part of Plaster.

### Mixing

Put in first a layer of sand, then one of Plaster, **hoe dry** from one end of the box to the other, and back again, working sand and Plaster thoroughly together. When thoroughly mixed, the material should be in the **high end** of the box.

**Use only clean sand,** free from loam or soil.

Any impurities, such as clay, quicksand, etc., will weaken the wall.

Do not mix sand and Plaster until ready to add the water.

Elevate one end of your mixing box three or four inches. Place your plaster at the upper and the water at the lower end of your box. Mix thin with water first, then add sufficient dry material to bring it to the right consistency for proper application. In all cases keep your mortar box and tools clean and use clean water.

Never retemper Plaster after it has commenced to set.

### Applying

**On Wood Lath Walls and Ceilings: For Two Coat Work:** Apply the base coat in the usual way, until time to darby, then sprinkle sparingly with water. Darby lightly, thus not forcing the mortar through the keys of lathing. Do not apply more at one time than you can darby before the material begins to set. A little experience quickly teaches you how much you can apply before using the darby.

**For Three Coat Work:** Walls and ceilings to receive a scratch coat and after it has set firm and hard (but before it is dry), apply a second coat of browning, bringing it to a level surface ready to receive the finishing coat.

**For Wire or Metal Lath:** Apply a scratch coat, lightly covering the lath. After the first coat has set firm and hard, apply the second coat, bringing it to a true surface ready to receive the finishing coat. In all cases darby lightly and use water sparingly.

**For Brick or Tile Walls:** First wet the walls thoroughly to reduce the suction and apply sufficient material to bring wall to a true and even surface, ready for the finish.

**For Sackett Plaster Board: Do not wet the boards before applying the plaster.** Adhesion between the plaster and dry board is perfect. Apply the same as on wood lath.

## UNITED STATES GYPSUM COMPANY'S BRANDS OF WOOD FIBRE PLASTER.

ALABASTER WOOD FIBRE

BAKER WOOD FIBRE

FLINT WOOD FIBRE

GRANITE WOOD FIBRE

IVORY WOOD FIBRE

ROCK WOOD FIBRE

ZENITH WOOD FIBRE

# WOOD FIBRE PLASTERS

## Mixing

This is a prepared dry mortar and requires the addition of water only in mixing it for use. Elevate one end of your mixing box three or four inches. Place your plaster at the upper end and the water at the lower end of your box. Mix thin with water first, then add sufficient dry material to bring it to the right consistency for proper application. In all cases keep your mortar box and tools clean and use clean water.

Mix two to four bags at a time—not more than can be put on and straightened in one and one-half hours.

A good plan is to put the proper amount of water in one end of the box and hoe the dry plaster into it, temper to a good mortar, not too stiff. When convenient it is a good plan to let the mortar soak a few minutes after being mixed, but it is not necessary. To get all the good results of Wood Fibre Plaster it should be used neat as shipped from the factory, although it will make a good wall using one part sand to one part plaster.

Adding sand hastens the set, so that smaller batches should be made when sand is added.

## Applying

A good way to apply Wood Fibre is to first scratch on the lath a very thin coat and double up with a coat when the scratch coat has started to set. When the Wood Fibre is to be troweled down smooth for a finish, the Wood Fibre should be used pure. When a float or trowel finish is desired, leave surface of base coat rough to receive the finish.

**On Brick, Tile or Concrete**: Mix equal parts plaster and clean, sharp sand and apply same as on lath.

**On Wire Lath**: Apply the mortar a little stiff, scratch a thin coat on the lath, just enough to cover the wire and after this coat is set hard apply a second coat mixed same as for brick to straighten up the walls. Wood Fibre is a very desirable material to use on wire lath.

**On Sackett Plaster Board**: Apply the mortar a little thin and follow directions for application on wood lath.

# UNITED STATES GYPSUM COMPANY'S BRANDS OF PREPARED WALL PLASTER.

ADAMANT

ALABASTER

BAKER

DIAMOND

FITZGERALD

FLINT

GRANITE

IMPERIAL

IVORY

ROCK

ZENITH

# PREPARED PLASTERS

## Mixing

This is a prepared dry mortar and requires the addition of water only in mixing it for use. Elevate one end of your mixing box 3 or 4 inches. Place your plaster at the upper and the water at the lower end of your box. Mix this with water first, then add sufficient dry material to bring it to the right consistency for proper application. In all cases, keep your mortar box and tools clean and use clean water.

## Applying

**On Wood Lath Walls and Ceilings: For Two Coat Work:** Apply the base coat in the usual way until time to darby, then sprinkle sparingly with water. Darby lightly, thus not forcing the mortar through the keys of lathing. Do not apply more at one time than you can darby before the material begins to set. A little experience quickly teaches you how much you can apply before using the darby.

**For Three Coat Work:** Walls and ceilings to receive a scratch coat, and after it has set firm and hard (but before it is dry), apply a second coat of browning, bringing it to a level surface ready to receive the finishing coat.

**For Wire or Metal Lath:** Apply a scratch coat, lightly covering the lath. After the first coat has set firm and hard, apply the second coat, bringing it to a true surface ready to receive the finishing coat. In all cases, darby lightly and use water sparingly.

**For Brick or Tile Walls:** First wet the walls thoroughly to reduce suction and apply sufficient material to bring wall to a true and even surface ready for the finish.

**For Sackett Plaster Board: Do not wet the boards before applying.** Adhesion between the plaster and dry board is perfect. Apply the same as on wood lath.

## UNITED STATES GYPSUM COMPANY'S BRANDS OF FINISHING PLASTER

Adamant No. 1 X, Gray Float or Sand Finish.

Adamant No. 1 XX, White Float or Sand Finish.

Adamant No. 1, Gray Trowel Finish.

Adamant No. 1 XXX, White Trowel Finish.

Adamant No. 40, Slate Colored Finish.

Imperial Gray Float or Sand Finish.

Imperial White Trowel Finish.

Rock Gray Float or Sand Finish.

Rock White Trowel Finish.

Ivory Gray Float or Sand Finish.

Ivory White Trowel Finish.

Universal — The "No Lime" White Trowel Finish.

Silico—The "No Lime" White Float Finish.

# FINISHES

In mixing finishes it is imperative to keep your mixing box, mortar board and tools perfectly clean and to use clean water. In applying, avoid joinings by working top and bottom together whenever possible. In troweling the finishes, use water sparingly to avoid killing the surface.

## Trowel Finishes

Always mix the material very thin.

In using our Trowel Finishes, the base coat must be thoroughly dry in order to secure a white wall. Apply the finish in two coats, the first time over put on enough material to cover the surface completely, laying it on level, smooth, and as thin as possible.

The second time over, put on the material perfectly level and smooth, obtaining a surface that can be readily troweled and finished—then trowel in the usual way, using water very sparingly.

## Sand Float Finishes

In applying a sand finish, mix the material thin. Apply this material after the first coat has set firm and hard and within 12 hours from the time the first coat is applied. Use a carpet or cork float and bring the material to a true and even surface, free from float marks and cat faces. In all cases use as little water as possible on the face while floating.

# PLASTER POINTERS

These hints and suggestions are just as important, to secure first-class, satisfactory results and to make the mechanic's work smooth and easy, as are the general instructions for mixing and applying. You may have heard some of them before—but it won't hurt you to read them again—it will do you good.

Read the Directions.

Clean the mixing box after each gauging.

Clean your tools.

Use clean water in mixing. Water that you've washed your tools in is **not** clean.

Don't mix one gauging with another.

Clean off the mortar board before you put on a fresh gauging.

Don't mix partly set material with fresh material.

Failure to observe any of the above points, will start crystallization sooner than you intend—material will set too quickly.

Dirt of any kind, old plaster, dirty water, is bound to make trouble.

Follow Directions. Our Plaster is **not** our Plaster unless used according to our Directions.

Do not retemper any material after it has started to set. Throw it away—it's time and money saved.

Don't blame the plaster. Find the **reason**. You can always depend on it—"there's a reason."

**Look out** for dry lath.

Wet the lath.

Both plaster and lath get "thirsty" in hot weather. Write us or ask your dealer for our little folder "Hot Weather Hints to Plaster People."

Close up doors and window openings in hot weather.

Don't let strong winds or hot blasts strike the green walls.

Don't pile plaster out of doors—heat and moisture will affect it.

Keep plaster off the ground—it will absorb dampness.

Don't pile plaster against green walls—bad for the wall and bad for the plaster.

Water from wells or hydrant is best.

Water from ponds or cisterns is bad.

## What to Do

Don't be alarmed if plaster doesn't set up on schedule time.

Keep damp till set.

Keep green walls from freezing eighteen hours.

Look out for frost; be sure the frost is **out** of the base before applying a finishing coat.

Apply mortar as quickly as possible after mixing.

Mix as you need it—that's the rule.

Mix at one time, only what you can use in one hour.

Plaster should not dry out before it sets. Should it show signs of drying out too quickly spray with clean water.

Soft spots, when dry, mean lack of water. Sprinkle the soft spots.

Keep the lath wet over doors and windows. They become dry in these places quicker than the walls.

Brick walls have great suction—sprinkle them well before plastering.

When you run against a snag—and can't figure it out—don't hesitate to write us. We're interested in **your** success—your success is ours—our interests are mutual.

Top notch quality plastering materials, of uniform working qualities—the kind you can always depend on—are a long stride towards success—a good foundation for you to build on. Don't forget that such materials are the U. S. G. Brands.

# DIRECTIONS

For Using The

# FOLLOWING TABLES

Which Any

## BUILDER AND CONTRACTOR

**Will find very valuable, as each table has been verified and can be relied upon as correct**

Tables Copyrighted 1900

These tables give the number of square yards and feet in several thousand sized rooms.

EXAMPLE: To obtain the number of square yards in a room 12 x 15 x 7. Turn to the table giving measurement of rooms with 7 foot ceiling; follow down the column of figures on the left until you come to 12, then follow the figures to the right until you come to the figures directly under the figure 15, at the top of the page; the answer is 62 square yards. When the half foot comes in the dimensions of a room, both ways, take the next largest number on one side. When it comes on one side only add one yard and it will be close.

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 7-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3** ..... | 10.3 | 12.2 | 14.1 | 16.0 | 17.8 | 19.7 | 21.6 | 23.5 | 25.4 | 27.3 | 29.2 | 31.1 | 33.0 | 34.8 | 36.7 | 38.6 | 40.5 | 42.4 | 44.3 | 46.2 |
| **4** ..... | 12.2 | 14.2 | 16.2 | 18.2 | 20.2 | 22.2 | 24.2 | 26.2 | 28.2 | 30.2 | 32.2 | 34.2 | 36.2 | 38.2 | 40.2 | 42.2 | 44.2 | 46.2 | 48.2 | 50.2 |
| **5** ..... | 14.1 | 16.2 | 18.3 | 20.4 | 22.5 | 24.6 | 26.7 | 28.8 | 31.0 | 33.1 | 35.2 | 37.3 | 39.4 | 41.5 | 43.6 | 45.7 | 47.8 | 50.0 | 52.1 | 54.2 |
| **6** ..... | 16.0 | 18.2 | 20.4 | 22.6 | 24.8 | 27.1 | 29.3 | 31.5 | 33.7 | 36.0 | 38.2 | 40.4 | 42.6 | 44.8 | 47.1 | 49.3 | 51.5 | 53.7 | 55.8 | 58.2 |
| **7** ..... | 17.8 | 20.2 | 22.5 | 24.8 | 27.2 | 29.5 | 31.8 | 34.2 | 36.5 | 38.8 | 41.2 | 43.5 | 45.8 | 48.2 | 50.5 | 52.8 | 55.2 | 57.5 | 59.8 | 62.2 |
| **8** ..... | 19.7 | 22.2 | 24.6 | 27.1 | 29.5 | 32.0 | 34.4 | 36.8 | 39.3 | 41.7 | 44.2 | 46.6 | 49.1 | 51.5 | 54.0 | 56.4 | 58.8 | 61.3 | 63.7 | 66.2 |
| **9** ..... | 21.6 | 24.2 | 26.7 | 29.3 | 31.8 | 34.4 | 37.0 | 39.5 | 42.1 | 44.6 | 47.2 | 49.7 | 52.3 | 54.8 | 57.4 | 60.0 | 62.5 | 65.1 | 67.6 | 70.2 |
| **10** ..... | 23.5 | 26.2 | 28.8 | 31.5 | 34.2 | 36.8 | 39.5 | 42.2 | 44.8 | 47.5 | 50.2 | 52.8 | 55.5 | 58.2 | 60.8 | 63.5 | 66.2 | 68.8 | 71.5 | 74.2 |
| **11** ..... | 25.4 | 28.2 | 31.0 | 33.7 | 36.5 | 39.3 | 42.1 | 44.8 | 47.6 | 50.4 | 53.2 | 56.0 | 58.7 | 61.5 | 64.3 | 67.1 | 69.8 | 72.6 | 75.4 | 78.2 |
| **12** ..... | 27.3 | 30.2 | 33.1 | 36.0 | 38.8 | 41.7 | 44.6 | 47.5 | 50.4 | 53.3 | 56.2 | 59.1 | 62.0 | 64.8 | 67.7 | 70.6 | 73.5 | 76.4 | 79.3 | 82.2 |
| **13** ..... | 29.2 | 32.2 | 35.2 | 38.2 | 41.2 | 44.2 | 47.2 | 50.2 | 53.2 | 56.2 | 59.2 | 62.2 | 65.2 | 68.2 | 71.2 | 74.2 | 77.2 | 80.2 | 83.2 | 86.2 |
| **14** ..... | 31.1 | 34.2 | 37.3 | 40.4 | 43.5 | 46.6 | 49.7 | 52.8 | 56.0 | 59.1 | 62.2 | 65.3 | 68.4 | 71.5 | 74.6 | 77.7 | 80.8 | 84.0 | 87.1 | 90.2 |
| **15** ..... | 33.0 | 36.2 | 39.4 | 42.6 | 45.8 | 49.1 | 52.3 | 55.5 | 58.7 | 62.0 | 65.2 | 68.4 | 71.6 | 74.8 | 78.1 | 81.3 | 84.5 | 87.7 | 91.0 | 94.2 |
| **16** ..... | 34.8 | 38.2 | 41.5 | 44.8 | 48.2 | 51.5 | 54.8 | 58.2 | 61.5 | 64.8 | 68.2 | 71.5 | 74.8 | 78.2 | 81.5 | 84.8 | 88.2 | 91.5 | 94.8 | 98.2 |
| **17** ..... | 36.7 | 40.2 | 43.6 | 47.1 | 50.5 | 54.0 | 57.4 | 60.8 | 64.3 | 67.7 | 71.2 | 74.6 | 78.1 | 81.5 | 85.5 | 88.4 | 91.8 | 95.3 | 98.7 | 102.2 |
| **18** ..... | 38.6 | 42.2 | 45.7 | 49.3 | 52.8 | 56.4 | 60.0 | 63.5 | 67.1 | 70.6 | 74.2 | 77.7 | 81.3 | 84.8 | 88.4 | 92.0 | 95.5 | 99.1 | 102.6 | 106.2 |
| **19** ..... | 40.5 | 44.2 | 47.8 | 51.5 | 55.2 | 58.8 | 62.5 | 66.2 | 69.8 | 73.5 | 77.2 | 80.8 | 84.5 | 88.2 | 91.8 | 95.5 | 99.2 | 102.8 | 106.5 | 110.2 |
| **20** ..... | 42.4 | 46.2 | 50.0 | 53.7 | 57.5 | 61.3 | 65.1 | 68.8 | 72.6 | 76.4 | 80.2 | 84.0 | 87.7 | 91.5 | 95.3 | 99.1 | 102.8 | 106.6 | 110.4 | 114.0 |
| **21** ..... | 44.3 | 48.2 | 52.1 | 55.8 | 59.8 | 63.7 | 67.6 | 71.5 | 75.4 | 79.3 | 83.2 | 87.1 | 91.0 | 94.8 | 98.7 | 102.6 | 106.5 | 110.4 | 114.3 | 118.2 |
| **22** ..... | 46.2 | 50.2 | 54.2 | 58.2 | 62.2 | 66.2 | 70.2 | 74.2 | 78.2 | 82.2 | 86.2 | 90.2 | 94.2 | 98.2 | 102.2 | 106.2 | 110.2 | 114.2 | 118.2 | 122.2 |
| **23** ..... | 48.0 | 52.2 | 56.3 | 60.4 | 64.5 | 68.6 | 72.1 | 76.8 | 81.0 | 85.1 | 89.2 | 93.3 | 97.4 | 101.5 | 105.6 | 109.7 | 113.8 | 118.0 | 122.1 | 126.2 |
| **24** ..... | 50.0 | 54.2 | 58.4 | 62.6 | 66.8 | 71.1 | 75.3 | 79.5 | 83.7 | 88.0 | 92.2 | 96.4 | 100.6 | 104.8 | 109.1 | 113.3 | 117.5 | 121.7 | 126.0 | 130.2 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 7.6-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 . . . | 11.0 | 13.0 | 15.0 | 17.0 | 19.0 | 21.0 | 23.0 | 25.0 | 27.0 | 29.0 | 31.0 | 33.0 | 35.0 | 37.0 | 39.0 | 41.0 | 43.0 | 45.0 | 47.0 | 49.0 |
| 4 . . . | 13.0 | 15.1 | 17.2 | 19.3 | 21.4 | 23.5 | 25.6 | 27.7 | 29.8 | 32.0 | 34.1 | 36.2 | 38.3 | 40.4 | 42.5 | 44.6 | 46.7 | 49.8 | 51.0 | 53.1 |
| 5 . . . | 15.0 | 17.2 | 19.4 | 21.6 | 23.8 | 26.1 | 28.3 | 30.5 | 32.7 | 35.0 | 37.2 | 39.4 | 41.6 | 43.8 | 46.1 | 48.3 | 50.5 | 52.7 | 55.0 | 57.2 |
| 6 . . . | 17.0 | 19.3 | 21.6 | 24.0 | 26.3 | 28.6 | 31.0 | 33.3 | 35.6 | 38.0 | 40.3 | 42.6 | 45.0 | 47.3 | 49.6 | 52.0 | 54.3 | 56.6 | 59.0 | 61.3 |
| 7 . . . | 19.0 | 21.4 | 23.8 | 26.3 | 28.7 | 31.2 | 33.6 | 36.1 | 38.5 | 41.0 | 43.4 | 45.8 | 48.3 | 50.7 | 53.2 | 55.6 | 58.1 | 60.5 | 63.0 | 65.4 |
| 8 . . . | 21.0 | 23.5 | 26.1 | 28.6 | 31.2 | 33.7 | 36.3 | 38.8 | 41.4 | 44.0 | 46.5 | 49.1 | 51.6 | 54.2 | 56.7 | 59.3 | 61.8 | 64.4 | 67.0 | 69.5 |
| 9 . . . | 23.0 | 25.6 | 28.3 | 31.0 | 33.6 | 36.3 | 39.0 | 41.6 | 44.3 | 47.0 | 49.6 | 52.3 | 55.0 | 57.6 | 60.3 | 63.0 | 65.6 | 68.3 | 71.0 | 73.6 |
| 10 . . . | 25.0 | 27.7 | 30.5 | 33.3 | 36.1 | 38.8 | 41.6 | 44.4 | 47.2 | 50.0 | 52.7 | 55.5 | 58.3 | 61.1 | 63.8 | 66.6 | 69.4 | 72.2 | 75.0 | 77.7 |
| 11 . . . | 27.0 | 29.8 | 32.7 | 35.6 | 38.5 | 41.4 | 44.3 | 47.2 | 50.1 | 53.0 | 55.8 | 58.7 | 61.6 | 64.5 | 67.4 | 70.3 | 73.2 | 76.1 | 79.0 | 81.8 |
| 12 . . . | 29.0 | 32.0 | 35.0 | 38.0 | 41.0 | 44.0 | 47.0 | 50.0 | 53.0 | 56.0 | 59.0 | 62.0 | 65.0 | 68.0 | 71.0 | 74.0 | 77.0 | 80.0 | 83.0 | 86.0 |
| 13 . . . | 31.0 | 34.1 | 37.2 | 40.3 | 43.4 | 46.5 | 49.6 | 52.7 | 55.8 | 59.0 | 62.1 | 65.2 | 68.3 | 71.4 | 74.5 | 77.6 | 80.7 | 84.8 | 87.0 | 90.1 |
| 14 . . . | 33.0 | 36.2 | 39.4 | 42.6 | 45.8 | 49.1 | 52.3 | 55.5 | 58.7 | 62.0 | 65.2 | 68.4 | 71.6 | 74.8 | 78.1 | 81.3 | 84.5 | 87.7 | 91.0 | 94.2 |
| 15 . . . | 35.0 | 38.3 | 41.6 | 45.0 | 48.3 | 51.6 | 55.0 | 58.3 | 61.6 | 65.0 | 68.3 | 71.6 | 75.0 | 78.3 | 81.6 | 85.0 | 88.3 | 91.6 | 95.0 | 98.3 |
| 16 . . . | 37.0 | 40.4 | 43.8 | 47.3 | 50.7 | 54.2 | 57.6 | 61.1 | 64.5 | 68.0 | 71.4 | 74.8 | 78.3 | 81.7 | 85.2 | 88.6 | 92.1 | 95.5 | 99.0 | 102.4 |
| 17 . . . | 39.0 | 42.5 | 46.1 | 49.6 | 53.2 | 56.7 | 60.3 | 63.8 | 67.4 | 71.0 | 74.5 | 78.1 | 81.6 | 85.2 | 88.7 | 92.3 | 95.8 | 99.4 | 103.0 | 106.5 |
| 18 . . . | 41.0 | 44.6 | 48.3 | 52.0 | 55.6 | 59.3 | 63.0 | 66.6 | 70.3 | 74.0 | 77.6 | 81.2 | 85.0 | 88.6 | 92.3 | 96.0 | 99.6 | 103.3 | 107.0 | 110.6 |
| 19 . . . | 43.0 | 46.7 | 50.5 | 54.3 | 58.1 | 61.8 | 65.6 | 69.4 | 73.2 | 77.0 | 80.7 | 84.5 | 88.3 | 92.1 | 95.8 | 99.6 | 103.4 | 107.2 | 111.0 | 114.7 |
| 20 . . . | 45.0 | 49.8 | 52.7 | 56.6 | 60.5 | 64.4 | 68.3 | 72.2 | 76.1 | 80.0 | 84.8 | 87.7 | 91.6 | 95.5 | 99.4 | 103.3 | 107.2 | 111.1 | 115.0 | 118.8 |
| 21 . . . | 47.0 | 51.0 | 55.0 | 59.0 | 63.0 | 67.0 | 71.0 | 75.0 | 79.0 | 83.0 | 87.0 | 91.0 | 95.0 | 99.0 | 103.0 | 107.0 | 111.0 | 115.0 | 119.0 | 123.0 |
| 22 . . . | 49.0 | 53.1 | 57.2 | 61.3 | 65.4 | 69.5 | 73.6 | 77.7 | 81.8 | 86.0 | 90.1 | 94.2 | 98.3 | 102.4 | 106.5 | 110.6 | 114.7 | 118.8 | 123.0 | 127.0 |
| 23 . . . | 51.0 | 55.2 | 59.4 | 63.6 | 67.8 | 72.1 | 76.3 | 80.5 | 84.7 | 89.0 | 93.2 | 97.4 | 101.6 | 105.8 | 110.1 | 114.3 | 118.5 | 122.7 | 127.0 | 131.2 |
| 24 . . . | 53.0 | 57.3 | 61.6 | 66.0 | 70.3 | 74.6 | 79.3 | 80.5 | 84.7 | 89.0 | 93.2 | 97.4 | 101.6 | 105.3 | 113.6 | 118.0 | 122.3 | 126.6 | 131.0 | 135.3 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 8-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 ... | 11.6 | 13.7 | 15.8 | 18.0 | 20.1 | 22.2 | 24.3 | 26.4 | 28.5 | 30.6 | 32.7 | 34.8 | 37.0 | 39 1 | 41.2 | 43.3 | 45.4 | 47.5 | 49.6 | 51.7 |
| 4 ... | 13.7 | 16.0 | 18.2 | 20.4 | 22.6 | 24.8 | 27.1 | 29.3 | 31.5 | 33.7 | 36.0 | 38.2 | 40.4 | 42 6 | 44.8 | 47.1 | 49.3 | 51.5 | 53.7 | 56.0 |
| 5 ... | 15.8 | 18.2 | 20.5 | 22.8 | 25.2 | 27.5 | 29.8 | 32.2 | 34.5 | 36.8 | 39.2 | 41.5 | 43.8 | 46 2 | 48.5 | 50.8 | 53.2 | 55.5 | 57.8 | 60.2 |
| 6 ... | 18.0 | 20.4 | 22.8 | 25.3 | 27.7 | 30.2 | 32.6 | 35.1 | 37.5 | 40.0 | 42.4 | 44.8 | 47.3 | 49 7 | 52.2 | 54.6 | 57.1 | 59.5 | 62.0 | 64.4 |
| 7 ... | 20.1 | 22.6 | 25.2 | 27.7 | 30.3 | 32.8 | 35.4 | 38.0 | 40.5 | 43.1 | 45.6 | 48.2 | 50.7 | 53 3 | 55.8 | 58.4 | 61.0 | 63.5 | 66.1 | 68.9 |
| 8 ... | 22.2 | 24.8 | 27.5 | 30.2 | 32.8 | 35.5 | 38.2 | 40.8 | 43.5 | 46.2 | 48.8 | 51.5 | 54.2 | 56 8 | 59.5 | 62.2 | 64.8 | 67.5 | 70.2 | 72.8 |
| 9 ... | 24.3 | 27.1 | 29.8 | 32.6 | 35.4 | 38.2 | 41.0 | 43.7 | 46.5 | 49.3 | 52.1 | 54.8 | 57.6 | 60 4 | 63.2 | 66.0 | 68.7 | 71.5 | 74.3 | 77.1 |
| 10 ... | 26.4 | 29.3 | 32.2 | 35.1 | 38.0 | 40.8 | 43.7 | 46.6 | 49.5 | 52.4 | 55.3 | 58.2 | 61.1 | 64 0 | 66.8 | 69.7 | 72.6 | 75.5 | 78.4 | 81.3 |
| 11 ... | 28.5 | 31.5 | 34.5 | 37.5 | 40.5 | 43.5 | 46.5 | 49.5 | 52.5 | 55.5 | 58.5 | 61.5 | 64.5 | 67 5 | 70.5 | 73.5 | 76.5 | 79.5 | 82.5 | 85.5 |
| 12 ... | 30.6 | 33.7 | 36.8 | 40.0 | 43.1 | 46.2 | 49.3 | 52.4 | 55.5 | 58.6 | 61.7 | 64.8 | 68.0 | 71 1 | 74.2 | 77.3 | 80.4 | 83.5 | 86.6 | 89.7 |
| 13 ... | 32.7 | 36.0 | 39.2 | 42.4 | 45.6 | 48.8 | 52.1 | 55.3 | 58.5 | 61.7 | 65.0 | 68.2 | 71.4 | 73.6 | 77.8 | 81.1 | 84.3 | 87.5 | 90.7 | 94.0 |
| 14 ... | 34.8 | 38.2 | 41.5 | 44.8 | 48.2 | 51.5 | 54.8 | 58.2 | 61.5 | 64.8 | 68.2 | 71.5 | 74.8 | 78 2 | 81.5 | 84.8 | 88.2 | 91.5 | 94.8 | 98.2 |
| 15 ... | 37.0 | 40.4 | 43.8 | 47.3 | 50.7 | 54.2 | 57.6 | 61.1 | 64.5 | 68.0 | 71.4 | 74.8 | 78.3 | 81 7 | 85.2 | 88.6 | 92.1 | 95.5 | 99.0 | 102.4 |
| 16 ... | 39.1 | 42.6 | 46.2 | 49.7 | 53.3 | 56.8 | 60.4 | 64.0 | 67.5 | 71.1 | 74.6 | 78.2 | 81.7 | 85 3 | 88.8 | 92.4 | 96.0 | 99.5 | 103.1 | 106.6 |
| 17 ... | 41.2 | 44.8 | 48.5 | 52.5 | 55.8 | 59.5 | 63.2 | 66.8 | 70.5 | 74.2 | 77.8 | 81.5 | 85.2 | 88 8 | 92.5 | 96.2 | 99.8 | 103.5 | 707.2 | 110.8 |
| 18 ... | 43.3 | 47.1 | 50.8 | 54.6 | 58.4 | 62.2 | 66.0 | 69.7 | 73.5 | 77.3 | 81.1 | 84.8 | 88.6 | 92 4 | 96.2 | 100.0 | 103.7 | 107.5 | 111.3 | 115.1 |
| 19 ... | 45.4 | 49.3 | 53.2 | 57.1 | 61.0 | 64.8 | 68.7 | 72.6 | 76.5 | 80.4 | 84.3 | 88.2 | 92.1 | 96 0 | 99.8 | 103.7 | 107.6 | 111.5 | 115.4 | 119.3 |
| 20 ... | 47.5 | 51.5 | 55.5 | 59.5 | 63.5 | 67.5 | 71.5 | 75.5 | 79.5 | 83.5 | 87.5 | 91.5 | 95.5 | 99.5 | 103.5 | 107.5 | 111.5 | 115.4 | 119.5 | 123.5 |
| 21 ... | 49.6 | 53.7 | 57.8 | 62.0 | 66.1 | 70.2 | 74.3 | 78.4 | 82.5 | 86.6 | 90.7 | 94.8 | 99.0 | 103 1 | 107.2 | 111.3 | 115.4 | 119.5 | 123.6 | 127.7 |
| 22 ... | 51.7 | 56.0 | 60.2 | 64.4 | 68.8 | 72.8 | 77.1 | 81.3 | 85.5 | 89.7 | 94.0 | 98.2 | 102.4 | 106 6 | 110.8 | 115.1 | 119.3 | 123.5 | 127.7 | 132.0 |
| 23 ... | 53.8 | 58.2 | 62.5 | 66.8 | 71.2 | 75.5 | 79.8 | 84.2 | 88.5 | 92.8 | 97.2 | 101.5 | 105.8 | 110 2 | 114.5 | 118.8 | 123.2 | 127.5 | 131.8 | 136.2 |
| **24** ... | 56.0 | 60.4 | 64.8 | 69.3 | 73.7 | 78.2 | 82.6 | 87.1 | 91.5 | 96.0 | 100.4 | 104.8 | 109.3 | 113 7 | 118.2 | 122.6 | 127.1 | 131.5 | 136.0 | 140.4 |

The amount indicated includes side walls and ceilings

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# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 8.6-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.. | 12.3 | 14.5 | 16.7 | 19.0 | 21.2 | 23.4 | 25.6 | 27.8 | 30.1 | 32.2 | 34.5 | 36.7 | 39.0 | 41.2 | 43.4 | 45.6 | 47.8 | 50.1 | 52.3 | 54.5 |
| 4.. | 14.5 | 16.8 | 19.2 | 21.5 | 23.8 | 26.2 | 28.5 | 30.8 | 33.2 | 35.5 | 37.8 | 40.2 | 42.5 | 44.8 | 47.2 | 49.5 | 51.8 | 54.2 | 56.5 | 58.8 |
| 5.. | 16.7 | 19.2 | 21.6 | 24.1 | 26.5 | 29.0 | 31.4 | 33.8 | 36.3 | 38.7 | 41.2 | 43.6 | 46.1 | 48.5 | 51.0 | 53.4 | 55.8 | 58.3 | 60.7 | 63.2 |
| 6.. | 19.0 | 21.5 | 24.1 | 26.6 | 29.2 | 31.7 | 34.3 | 36.8 | 39.4 | 42.0 | 44.5 | 47.1 | 49.6 | 52.5 | 54.7 | 57.3 | 59.8 | 62.4 | 65.0 | 67.5 |
| 7.. | 21.2 | 23.8 | 26.5 | 29.2 | 31.8 | 34.5 | 37.2 | 39.8 | 42.5 | 45.2 | 47.8 | 50.5 | 53.2 | 55.8 | 58.5 | 61.2 | 63.8 | 66.5 | 69.2 | 71.8 |
| 8.. | 23.4 | 26.2 | 29.0 | 31.7 | 34.5 | 37.3 | 40.1 | 42.8 | 45.6 | 48.4 | 51.2 | 54.0 | 56.7 | 59.5 | 62.3 | 65.1 | 67.8 | 70.6 | 73.4 | 76.2 |
| 9.. | 25.6 | 28.5 | 31.4 | 34.3 | 37.2 | 40.1 | 43.0 | 45.8 | 48.7 | 51.6 | 54.5 | 57.4 | 60.3 | 63.2 | 66.1 | 69.0 | 71.8 | 74.7 | 77.6 | 80.5 |
| 10.. | 27.8 | 30.8 | 33.8 | 36.8 | 39.8 | 42.8 | 45.8 | 48.8 | 51.8 | 54.8 | 57.8 | 60.8 | 63.8 | 66.8 | 69.8 | 72.8 | 75.8 | 78.8 | 81.8 | 84.8 |
| 11.. | 30.1 | 33.2 | 36.3 | 39.4 | 42.5 | 45.6 | 48.7 | 51.8 | 55.0 | 58.1 | 61.2 | 64.3 | 67.4 | 70.5 | 73.6 | 76.7 | 79.8 | 83.0 | 86.1 | 89.2 |
| 12.. | 32.2 | 35.5 | 38.7 | 42.0 | 45.2 | 48.4 | 51.6 | 54.8 | 58.1 | 61.3 | 64.5 | 67.7 | 71.0 | 74.2 | 77.4 | 80.6 | 83.8 | 87.1 | 90.3 | 93.5 |
| 13.. | 34.5 | 37.8 | 41.2 | 44.5 | 47.8 | 51.2 | 54.5 | 57.8 | 61.2 | 64.5 | 67.8 | 71.2 | 74.5 | 77.8 | 81.2 | 84.5 | 87.8 | 91.2 | 94.5 | 97.8 |
| 14.. | 36.7 | 40.2 | 43.6 | 47.1 | 50.5 | 54.0 | 57.4 | 60.8 | 64.3 | 67.7 | 71.2 | 74.6 | 78.1 | 81.5 | 85.0 | 88.4 | 91.8 | 95.3 | 98.7 | 102.2 |
| 15.. | 39.0 | 42.5 | 46.1 | 49.6 | 53.2 | 56.7 | 60.3 | 63.8 | 67.4 | 71.0 | 74.5 | 78.1 | 81.6 | 85.2 | 88.7 | 92.3 | 95.8 | 99.4 | 103.0 | 106.5 |
| 16.. | 41.2 | 44.8 | 48.5 | 52.2 | 55.8 | 59.5 | 63.2 | 66.8 | 70.5 | 74.2 | 77.8 | 81.5 | 85.2 | 88.8 | 92.5 | 96.2 | 99.8 | 103.5 | 107.2 | 110.8 |
| 17.. | 43.4 | 47.2 | 51.0 | 54.7 | 58.5 | 62.3 | 66.1 | 69.8 | 73.6 | 77.4 | 81.2 | 85.0 | 88.7 | 92.5 | 96.3 | 100.1 | 103.8 | 107.6 | 111.4 | 115.2 |
| 18.. | 45.6 | 49.5 | 53.4 | 75.3 | 61.2 | 65.1 | 69.0 | 72.8 | 76.7 | 80.6 | 84.5 | 88.4 | 92.3 | 96.2 | 100.1 | 104.0 | 107.8 | 111.7 | 115.6 | 119.5 |
| 19.. | 47.8 | 51.8 | 55.8 | 59.8 | 63.8 | 67.8 | 71.8 | 75.8 | 79.8 | 83.8 | 87.8 | 91.8 | 95.8 | 99.8 | 103.8 | 107.8 | 111.8 | 115.8 | 119.8 | 123.8 |
| 20.. | 50.1 | 54.2 | 58.3 | 62.4 | 66.5 | 70.6 | 74.7 | 78.8 | 83.0 | 87.1 | 91.2 | 95.3 | 99.4 | 103.5 | 107.6 | 111.7 | 115.8 | 120.0 | 124.1 | 128.2 |
| 21.. | 52.3 | 56.5 | 60.7 | 65.0 | 69.2 | 73.4 | 77.6 | 81.8 | 86.1 | 90.3 | 94.5 | 98.7 | 103.0 | 107.2 | 111.4 | 115.6 | 119.8 | 124.1 | 128.3 | 132.5 |
| 22.. | 54.5 | 58.8 | 63.2 | 67.5 | 71.8 | 76.2 | 80.5 | 84.8 | 89.2 | 93.5 | 97.8 | 102.2 | 106.5 | 110.8 | 115.2 | 119.5 | 123.8 | 128.2 | 132.5 | 136.8 |
| 23.. | 56.7 | 61.2 | 65.6 | 70.1 | 74.5 | 79.0 | 83.4 | 87.8 | 92.3 | 96.7 | 101.2 | 105.6 | 110.1 | 114.5 | 119.1 | 123.4 | 127.8 | 132.3 | 136.7 | 141.2 |
| 24.. | 59.0 | 63.5 | 68.1 | 72.6 | 77.2 | 81.7 | 86.3 | 90.8 | 95.4 | 100.0 | 104.5 | 109.1 | 113.6 | 118.2 | 122.7 | 127.3 | 131.8 | 136.4 | 141.0 | 145.5 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 9-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.. | 13.0 | 15.3 | 17.6 | 20.0 | 22.3 | 24.6 | 27.0 | 29.3 | 31.6 | 34.0 | 36.3 | 38.6 | 41.0 | 43.3 | 45.6 | 48.0 | 50.3 | 52.6 | 55.0 | 57.3 |
| 4.. | 15.3 | 17.7 | 20.2 | 22.6 | 25.1 | 27.5 | 30.0 | 32.4 | 34.8 | 37.3 | 39.7 | 42.2 | 44.6 | 47.1 | 49.5 | 52.0 | 54.4 | 56.8 | 59.3 | 61.7 |
| 5.. | 17.6 | 20.2 | 22.7 | 25.3 | 27.8 | 30.4 | 33.0 | 35.5 | 38.1 | 40.6 | 43.2 | 45.7 | 48.3 | 50.8 | 53.4 | 56.0 | 58.5 | 61.1 | 63.6 | 66.2 |
| 6.. | 20.0 | 22.6 | 25.3 | 28.0 | 30.6 | 33.3 | 36.0 | 38.6 | 41.3 | 44.0 | 46.6 | 49.3 | 52.0 | 54.6 | 57.3 | 60.0 | 63.5 | 65.4 | 68.0 | 70.6 |
| 7.. | 22.3 | 25.1 | 27.8 | 30.6 | 33.4 | 36.2 | 39.0 | 41.7 | 44.5 | 47.3 | 50.1 | 52.8 | 55.6 | 58.4 | 61.2 | 64.0 | 66.7 | 69.5 | 72.3 | 75.1 |
| 8.. | 24.6 | 27.5 | 30.4 | 33.3 | 36.2 | 39.1 | 42.0 | 44.8 | 47.7 | 50.6 | 53.5 | 56.4 | 59.3 | 62.2 | 65.1 | 68.0 | 70.8 | 73.7 | 77.6 | 79.5 |
| 9.. | 27.0 | 30.0 | 33.0 | 36.0 | 39.0 | 42.0 | 45.0 | 48.0 | 51.0 | 54.0 | 57.0 | 60.0 | 63.0 | 66.0 | 69.0 | 72.0 | 75.0 | 78.0 | 81.0 | 84.0 |
| 10.. | 29.3 | 32.4 | 35.5 | 38.6 | 41.7 | 44.8 | 48.0 | 52.0 | 54.2 | 57.3 | 60.4 | 63.5 | 66.6 | 69.7 | 72.8 | 76.0 | 79.1 | 82.2 | 85.3 | 88.4 |
| 11.. | 31.6 | 34.8 | 38.1 | 41.3 | 44.5 | 47.7 | 51.0 | 54.2 | 57.4 | 60.6 | 63.8 | 67.1 | 70.3 | 73.5 | 76.7 | 80.0 | 83.2 | 86.4 | 89.6 | 92.8 |
| 12.. | 34.0 | 37.3 | 40.6 | 44.0 | 47.3 | 50.6 | 54.0 | 57.3 | 60.6 | 64.0 | 67.3 | 70.6 | 74.0 | 77.3 | 80.6 | 84.0 | 87.3 | 90.6 | 94.0 | 97.3 |
| 13.. | 36.3 | 39.7 | 43.2 | 46.6 | 50.1 | 53.5 | 57.0 | 60.4 | 63.8 | 67.3 | 70.7 | 74.2 | 77.6 | 81.1 | 84.5 | 88.0 | 91.4 | 94.8 | 98.3 | 101.7 |
| 14.. | 38.6 | 42.2 | 45.7 | 49.3 | 52.8 | 56.4 | 60.0 | 63.5 | 67.1 | 70.6 | 74.2 | 77.7 | 81.3 | 84.8 | 88.4 | 92.0 | 95.5 | 99.1 | 102.6 | 106.2 |
| 15.. | 41.0 | 44.6 | 48.3 | 52.0 | 55.6 | 59.3 | 63.0 | 66.6 | 70.3 | 74.0 | 77.6 | 81.3 | 85.0 | 88.6 | 92.3 | 96.0 | 99.6 | 103.3 | 107.0 | 111.6 |
| 16.. | 43.3 | 47.1 | 50.8 | 54.6 | 58.4 | 62.2 | 66.0 | 69.7 | 73.5 | 77.3 | 81.1 | 84.8 | 88.6 | 92.4 | 96.2 | 100.0 | 103.7 | 107.5 | 111.3 | 115.1 |
| 17.. | 45.6 | 49.5 | 53.4 | 57.3 | 61.2 | 65.1 | 69.0 | 72.8 | 76.7 | 80.6 | 84.5 | 88.4 | 92.3 | 96.2 | 100.4 | 104.0 | 107.8 | 111.7 | 115.6 | 119.5 |
| 18.. | 48.0 | 52.0 | 56.0 | 60.0 | 64.0 | 68.0 | 72.0 | 76.0 | 80.0 | 84.0 | 88.0 | 92.0 | 96.0 | 100.0 | 104.0 | 108.0 | 112.0 | 116.0 | 120.0 | 124.0 |
| 19.. | 50.3 | 54.4 | 58.5 | 62.6 | 66.7 | 70.8 | 78.0 | 79.1 | 83.2 | 87.3 | 91.4 | 95.5 | 99.6 | 103.7 | 107.8 | 112.0 | 116.1 | 120.2 | 124.3 | 128.4 |
| 20.. | 52.6 | 56.8 | 61.1 | 65.3 | 69.5 | 73.7 | 78.0 | 82.2 | 86.4 | 90.6 | 94.8 | 99.1 | 103.3 | 107.5 | 111.7 | 116.0 | 120.2 | 124.4 | 128.6 | 132.8 |
| 21.. | 55.0 | 59.3 | 63.6 | 68.0 | 72.3 | 76.6 | 81.0 | 85.3 | 89.6 | 94.0 | 98.3 | 102.6 | 107.0 | 111.3 | 115.6 | 120.0 | 124.3 | 128.6 | 134.3 | 137.3 |
| 22.. | 57.3 | 61.7 | 66.2 | 70.6 | 75.1 | 79.5 | 84.0 | 88.4 | 92.8 | 97.3 | 101.7 | 106.2 | 111.6 | 115.1 | 121.5 | 124.0 | 128.4 | 132.8 | 137.3 | 141.7 |
| 23.. | 59.6 | 64.2 | 68.7 | 73.3 | 77.8 | 82.4 | 87.0 | 91.5 | 95.1 | 100.6 | 105.2 | 109.7 | 114.3 | 118.8 | 123.4 | 128.0 | 132.5 | 137.0 | 141.6 | 146.2 |
| 24.. | 62.0 | 66.6 | 71.3 | 76.0 | 80.6 | 85.3 | 90.0 | 94.6 | 99.3 | 104.0 | 108.6 | 113.3 | 118.0 | 122.6 | 127.3 | 132.0 | 136.6 | 141.3 | 146.0 | 150.6 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 9.6-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.. | 13.6 | 16.1 | 18.5 | 21.0 | 23.4 | 25.8 | 28.3 | 30.7 | 33.2 | 35.6 | 38.1 | 40.5 | 43.0 | 45.4 | 47.8 | 50.3 | 52.7 | 55.2 | 57.6 | 60.1 |
| 4.. | 16.1 | 18.6 | 21.2 | 23.7 | 26.3 | 28.8 | 31.4 | 34.0 | 36.5 | 39.1 | 41.6 | 44.2 | 46.7 | 49.3 | 51.8 | 54.4 | 57.0 | 59.5 | 62.1 | 64.6 |
| 5.. | 18.5 | 21.2 | 23.8 | 26.5 | 29.2 | 31.8 | 34.5 | 37.2 | 39.8 | 42.5 | 45.2 | 47.8 | 50.5 | 53.2 | 55.8 | 58.5 | 61.2 | 63.8 | 66.5 | 69.2 |
| 6.. | 21.0 | 23.7 | 26.5 | 29.3 | 32.1 | 34.8 | 37.6 | 40.4 | 43.2 | 46.0 | 48.7 | 51.5 | 54.3 | 57.1 | 59.8 | 62.6 | 65.4 | 68.2 | 71.0 | 73.7 |
| 7.. | 23.4 | 26.3 | 29.2 | 32.1 | 35.0 | 37.8 | 40.7 | 43.6 | 46.5 | 49.4 | 52.3 | 55.2 | 58.1 | 61.0 | 63.8 | 66.7 | 69.6 | 72.5 | 75.4 | 78.3 |
| 8.. | 25.8 | 28.8 | 31.8 | 34.8 | 37.8 | 40.8 | 43.8 | 46.8 | 49.8 | 52.8 | 55.8 | 58.8 | 61.8 | 64.8 | 67.8 | 70.8 | 73.8 | 76.8 | 79.8 | 82.8 |
| 9.. | 28.3 | 31.4 | 34.5 | 37.6 | 40.7 | 43.8 | 47.0 | 50.1 | 53.2 | 56.3 | 59.4 | 62.5 | 65.6 | 68.7 | 71.8 | 75.0 | 78.1 | 81.2 | 84.3 | 87.4 |
| 10.. | 30.7 | 34.0 | 37.2 | 40.4 | 43.6 | 46.8 | 50.1 | 53.3 | 56.5 | 59.7 | 63.0 | 66.2 | 69.4 | 72.6 | 75.8 | 79.1 | 82.3 | 85.5 | 88.7 | 92.0 |
| 11.. | 33.2 | 36.5 | 39.8 | 43.2 | 46.5 | 49.8 | 53.2 | 56.5 | 59.8 | 63.2 | 66.5 | 69.8 | 73.2 | 76.5 | 79.8 | 83.2 | 86.5 | 89.8 | 93.2 | 96.5 |
| 12.. | 35.6 | 39.1 | 42.5 | 46.0 | 49.4 | 52.8 | 56.3 | 59.7 | 63.2 | 66.5 | 70.1 | 73.5 | 77.0 | 80.4 | 83.8 | 87.3 | 90.7 | 94.2 | 97.6 | 101.1 |
| 13.. | 38.1 | 41.6 | 45.2 | 48.7 | 52.3 | 55.8 | 59.4 | 63.0 | 66.5 | 70.1 | 73.6 | 77.2 | 80.7 | 84.3 | 87.8 | 91.4 | 95.0 | 98.5 | 102.1 | 105.6 |
| 14.. | 40.5 | 44.2 | 47.8 | 51.5 | 55.2 | 58.8 | 62.5 | 66.2 | 69.8 | 73.5 | 77.2 | 80.8 | 84.5 | 88.2 | 91.8 | 95.5 | 99.2 | 102.8 | 106.5 | 110.2 |
| 15.. | 43.0 | 46.7 | 50.5 | 54.3 | 58.1 | 61.8 | 65.6 | 69.4 | 73.2 | 77.0 | 80.7 | 84.5 | 88.3 | 92.1 | 95.8 | 99.6 | 103.4 | 107.2 | 111.0 | 114.7 |
| 16.. | 45.4 | 49.3 | 53.2 | 57.1 | 61.0 | 64.8 | 68.7 | 72.6 | 76.5 | 80.4 | 84.3 | 88.2 | 92.1 | 96.0 | 99.8 | 103.7 | 107.6 | 111.5 | 115.4 | 119.3 |
| 17.. | 47.8 | 51.8 | 55.8 | 59.8 | 63.8 | 67.8 | 71.8 | 75.8 | 79.8 | 83.8 | 87.8 | 91.8 | 95.8 | 99.8 | 103.8 | 107.8 | 111.8 | 115.8 | 119.8 | 123.8 |
| 18.. | 50.3 | 54.4 | 68.5 | 62.6 | 66.7 | 70.8 | 75.0 | 79.1 | 83.2 | 87.3 | 91.4 | 95.5 | 99.6 | 103.7 | 107.8 | 112.0 | 116.1 | 120.2 | 124.3 | 128.4 |
| 19.. | 52.7 | 57.0 | 61.2 | 65.4 | 69.6 | 73.8 | 78.1 | 82.3 | 86.5 | 90.7 | 95.0 | 99.0 | 103.4 | 107.6 | 111.8 | 116.1 | 120.3 | 124.5 | 128.7 | 133.0 |
| 20.. | 55.2 | 59.5 | 63.8 | 68.2 | 72.5 | 76.8 | 81.2 | 85.5 | 89.8 | 94.2 | 98.5 | 102.8 | 107.2 | 111.5 | 115.8 | 120.2 | 124.5 | 128.8 | 133.2 | 137.5 |
| 21.. | 57.6 | 62.1 | 66.5 | 71.0 | 75.4 | 79.8 | 84.3 | 88.7 | 93.2 | 97.6 | 102.1 | 106.5 | 111.0 | 115.4 | 119.8 | 124.3 | 128.7 | 133.2 | 137.6 | 142.1 |
| 22.. | 60.1 | 64.6 | 69.2 | 73.7 | 78.3 | 82.8 | 87.4 | 92.0 | 96.5 | 101.1 | 105.6 | 110.2 | 114.7 | 119.3 | 123.8 | 128.4 | 133.0 | 137.5 | 142.1 | 146.6 |
| 23.. | 62.5 | 67.2 | 71.8 | 76.5 | 81.2 | 85.8 | 90.5 | 95.2 | 99.8 | 104.5 | 109.2 | 113.8 | 118.5 | 123.2 | 127.8 | 132.5 | 137.2 | 141.8 | 146.5 | 151.2 |
| **24..** | 65.0 | 69.7 | 74.5 | 79.3 | 84.1 | 88.8 | 93.6 | 98.4 | 103.2 | 108.0 | 112.7 | 117.5 | 122.3 | 137.1 | 131.8 | 136.6 | 141.4 | 146.2 | 151.0 | 155.7 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 10-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.. | 14.3 | 16.8 | 19.4 | 22.0 | 24.5 | 27.1 | 29.6 | 32.2 | 34.7 | 37.3 | 39.8 | 42.4 | 45.0 | 47.5 | 50.1 | 52.6 | 55.2 | 57.7 | 60.3 | 62.8 |
| 4.. | 16.8 | 19.5 | 22.2 | 24.8 | 27.5 | 30.2 | 32.8 | 35.5 | 38.2 | 40.8 | 43.5 | 46.2 | 48.8 | 51.5 | 54.2 | 56.8 | 59.5 | 62.2 | 64.8 | 67.5 |
| 5.. | 19.4 | 22.2 | 25.0 | 27.7 | 30.5 | 33.3 | 36.1 | 38.8 | 41.6 | 44.4 | 47.2 | 50.0 | 52.7 | 55.5 | 58.3 | 61.1 | 63.8 | 66.6 | 69.4 | 72.2 |
| 6.. | 22.0 | 24.8 | 27.7 | 30.6 | 33.5 | 36.4 | 39.3 | 42.2 | 45.1 | 48.0 | 50.8 | 53.7 | 56.6 | 59.5 | 62.4 | 65.3 | 68.2 | 71.1 | 74.0 | 76.8 |
| 7.. | 24.5 | 27.5 | 30.5 | 33.5 | 36.5 | 39.5 | 42.5 | 45.5 | 48.5 | 51.5 | 54.5 | 57.5 | 60.5 | 63.5 | 66.5 | 69.5 | 72.5 | 75.5 | 78.5 | 81.5 |
| 8.. | 27.1 | 30.2 | 33.3 | 36.4 | 39.5 | 42.6 | 45.7 | 48.8 | 52.0 | 55.1 | 58.2 | 61.3 | 64.4 | 67.5 | 70.6 | 73.7 | 76.8 | 80.0 | 83.1 | 86.2 |
| 9.. | 29.6 | 32.8 | 36.1 | 39.3 | 42.5 | 45.7 | 49.0 | 52.2 | 55.4 | 58.6 | 61.8 | 65.1 | 68.3 | 71.5 | 74.7 | 78.0 | 81.2 | 84.4 | 87.6 | 90.8 |
| 10.. | 32.3 | 35.5 | 38.8 | 42.2 | 45.5 | 48.8 | 52.2 | 55.5 | 58.8 | 62.2 | 65.5 | 68.8 | 72.2 | 75.5 | 78.8 | 82.2 | 85.5 | 88.8 | 92.2 | 95.5 |
| 11.. | 34.7 | 38.2 | 41.6 | 45.1 | 48.5 | 52.0 | 55.4 | 58.8 | 62.3 | 65.7 | 69.2 | 72.6 | 76.1 | 79.5 | 83.0 | 86.4 | 89.8 | 93.3 | 96.7 | 100.2 |
| 12.. | 37.3 | 40.8 | 44.4 | 48.0 | 51.5 | 55.1 | 58.6 | 62.2 | 65.7 | 69.3 | 72.8 | 76.4 | 80.0 | 83.5 | 87.1 | 90.6 | 94.2 | 97.7 | 101.3 | 104.8 |
| 13.. | 39.8 | 43.5 | 47.2 | 50.8 | 54.5 | 58.2 | 61.8 | 65.5 | 69.2 | 72.8 | 76.5 | 80.2 | 83.8 | 87.5 | 91.2 | 94.8 | 98.5 | 102.2 | 105.8 | 109.5 |
| 14.. | 42.4 | 46.2 | 50.0 | 53.7 | 57.5 | 61.3 | 65.1 | 68.8 | 72.6 | 76.4 | 80.2 | 84.0 | 87.7 | 91.5 | 95.3 | 99.1 | 102.8 | 106.6 | 110.4 | 114.2 |
| 15.. | 45.0 | 48.8 | 52.7 | 56.6 | 60.5 | 64.4 | 68.3 | 72.2 | 76.1 | 80.0 | 83.8 | 87.7 | 91.6 | 95.5 | 99.4 | 103.3 | 107.2 | 111.1 | 115.0 | 118.8 |
| 16.. | 47.5 | 51.5 | 55.5 | 59.5 | 63.5 | 67.5 | 71.5 | 75.5 | 79.5 | 83.5 | 87.5 | 91.5 | 95.5 | 99.5 | 103.5 | 107.5 | 111.5 | 115.5 | 119.5 | 123.5 |
| 17.. | 50.1 | 54.2 | 58.3 | 62.4 | 66.5 | 70.6 | 74.7 | 78.8 | 83.0 | 87.1 | 91.2 | 95.3 | 99.4 | 103.5 | 107.6 | 111.7 | 115.8 | 120.0 | 124.1 | 128.2 |
| 18.. | 52.6 | 56.8 | 61.1 | 65.3 | 69.5 | 73.7 | 78.0 | 82.2 | 86.4 | 90.6 | 94.8 | 99.1 | 103.3 | 107.5 | 111.7 | 116.0 | 120.2 | 124.4 | 128.6 | 132.8 |
| 19.. | 55.2 | 59.5 | 63.8 | 68.2 | 72.5 | 76.8 | 81.2 | 85.5 | 89.8 | 94.2 | 98.5 | 102.8 | 107.2 | 111.5 | 115.8 | 120.2 | 124.5 | 128.8 | 133.2 | 137.5 |
| 20.. | 57.7 | 62.2 | 66.6 | 71.1 | 75.5 | 80.0 | 84.4 | 88.8 | 93.3 | 97.7 | 102.2 | 106.6 | 111.1 | 115.5 | 120.0 | 124.4 | 128.8 | 133.3 | 137.7 | 142.2 |
| 21.. | 60.3 | 64.8 | 69.4 | 74.0 | 78.5 | 83.1 | 87.6 | 92.2 | 96.7 | 101.3 | 105.8 | 110.4 | 115.0 | 119.5 | 124.1 | 128.6 | 133.2 | 137.7 | 142.3 | 146.8 |
| 22.. | 62.8 | 67.5 | 72.2 | 76.8 | 81.5 | 86.2 | 90.8 | 95.5 | 100.2 | 104.8 | 109.5 | 114.2 | 118.8 | 123.5 | 128.2 | 132.8 | 137.5 | 142.2 | 146.8 | 151.5 |
| 23.. | 65.4 | 70.2 | 75.0 | 79.7 | 84.5 | 89.3 | 94.1 | 98.8 | 103.6 | 108.4 | 113.2 | 118.0 | 122.7 | 127.5 | 132.3 | 137.1 | 141.8 | 146.6 | 151.4 | 156.2 |
| 24.. | 68.0 | 72.8 | 77.7 | 82.6 | 87.5 | 92.4 | 97.3 | 102.2 | 107.1 | 112.1 | 114.8 | 116.6 | 121.7 | 131.5 | 136.4 | 141.3 | 146.2 | 151.1 | 156.0 | 160.8 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 10.6-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3. | 15.0 | 17.6 | 20.3 | 23.0 | 25.6 | 28.3 | 31.0 | 33.6 | 36.3 | 39.0 | 41.6 | 44.3 | 47.0 | 49.6 | 52.3 | 55.0 | 57.6 | 60.3 | 63.0 | 55.6 |
| 4. | 17.6 | 20.4 | 23.2 | 26.0 | 28.7 | 31.5 | 34.3 | 37.1 | 39.8 | 42.6 | 45.4 | 48.2 | 51.0 | 53.7 | 56.5 | 59.3 | 62.1 | 64.8 | 67.6 | 70.4 |
| 5. | 20.3 | 23.2 | 26.1 | 29.0 | 31.8 | 34.7 | 37.6 | 40.5 | 43.4 | 46.3 | 49.2 | 52.1 | 55.0 | 57.8 | 60.7 | 63.6 | 66.5 | 69.4 | 72.3 | 75.2 |
| 6. | 23.0 | 26.0 | 29.0 | 32.0 | 35.0 | 38.0 | 41.0 | 44.0 | 47.0 | 50.0 | 53.0 | 56.0 | 59.0 | 62.0 | 65.0 | 68.0 | 71.0 | 74.0 | 77.0 | 80.0 |
| 7. | 25.6 | 28.7 | 31.8 | 35.0 | 38.1 | 41.2 | 44.3 | 47.4 | 50.5 | 53.6 | 56.7 | 59.8 | 63.0 | 66.1 | 69.2 | 72.3 | 75.4 | 78.5 | 81.6 | 84.7 |
| 8. | 28.3 | 31.5 | 34.7 | 38.0 | 41.2 | 44.4 | 47.6 | 50.8 | 54.1 | 57.3 | 60.5 | 63.7 | 67.0 | 70.2 | 73.4 | 76.6 | 79.8 | 83.1 | 86.3 | 89.5 |
| 9. | 31.0 | 34.3 | 37.6 | 41.0 | 44.3 | 47.6 | 51.0 | 54.3 | 57.6 | 61.0 | 64.3 | 67.6 | 71.0 | 74.3 | 77.6 | 81.0 | 84.3 | 87.6 | 91.0 | 94.3 |
| 10. | 33.6 | 37.1 | 40.5 | 44.0 | 47.4 | 50.8 | 54.3 | 57.7 | 61.2 | 64.6 | 68.1 | 71.5 | 75.0 | 78.4 | 81.8 | 85.3 | 88.7 | 92.2 | 95.6 | 99.1 |
| 11. | 36.3 | 39.8 | 43.4 | 47.0 | 50.5 | 54.1 | 57.6 | 61.2 | 64.7 | 68.3 | 71.8 | 75.4 | 79.0 | 82.5 | 86.1 | 89.6 | 93.2 | 96.7 | 100.3 | 103.8 |
| 12. | 39.0 | 42.6 | 46.3 | 50.0 | 53.6 | 57.3 | 61.0 | 64.6 | 68.3 | 72.0 | 75.6 | 79.3 | 83.0 | 86.6 | 90.3 | 94.0 | 97.6 | 101.3 | 105.0 | 108.6 |
| 13. | 41.6 | 45.4 | 49.2 | 53.0 | 56.7 | 60.5 | 64.3 | 68.1 | 71.8 | 75.6 | 79.4 | 83.2 | 87.0 | 90.7 | 94.5 | 98.3 | 102.1 | 105.8 | 109.6 | 113.4 |
| 14. | 44.3 | 48.2 | 52.1 | 56.0 | 59.8 | 63.7 | 67.6 | 71.5 | 75.4 | 79.3 | 83.2 | 87.1 | 91.0 | 94.8 | 98.7 | 102.6 | 106.5 | 110.4 | 114.3 | 118.2 |
| 15. | 47.0 | 51.0 | 55.0 | 59.0 | 63.0 | 67.0 | 71.0 | 75.0 | 79.0 | 83.0 | 87.0 | 91.0 | 95.0 | 99.0 | 103.0 | 107.0 | 111.0 | 115.0 | 119.0 | 123.0 |
| 16. | 49.6 | 53.7 | 57.8 | 62.0 | 66.1 | 70.2 | 74.3 | 78.4 | 82.5 | 86.6 | 90.7 | 94.8 | 99.0 | 103.1 | 107.2 | 111.3 | 115.4 | 119.5 | 123.6 | 127.7 |
| 17. | 52.3 | 56.5 | 60.7 | 65.0 | 69.2 | 73.4 | 77.6 | 81.8 | 86.1 | 90.3 | 94.5 | 98.7 | 103.0 | 107.2 | 111.4 | 115.6 | 119.8 | 124.1 | 128.3 | 132.5 |
| 18. | 55.0 | 59.3 | 63.6 | 68.0 | 72.3 | 76.6 | 81.0 | 85.3 | 89.6 | 94.0 | 98.3 | 102.6 | 107.0 | 111.3 | 115.6 | 120.0 | 124.3 | 128.6 | 133.0 | 137.3 |
| 19. | 57.6 | 62.1 | 66.5 | 71.0 | 75.4 | 79.8 | 84.3 | 88.7 | 93.2 | 97.6 | 102.1 | 106.5 | 111.0 | 115.4 | 119.8 | 124.3 | 128.7 | 133.2 | 137.6 | 142.1 |
| 20. | 60.3 | 64.8 | 69.4 | 74.0 | 78.5 | 83.1 | 87.6 | 92.2 | 96.7 | 101.3 | 105.8 | 110.4 | 115.0 | 119.5 | 124.1 | 128.6 | 133.2 | 137.7 | 142.3 | 146.8 |
| 21. | 63.0 | 67.6 | 72.3 | 77.0 | 81.6 | 86.3 | 91.0 | 95.6 | 100.3 | 105.0 | 109.6 | 114.3 | 119.0 | 123.6 | 128.3 | 133.0 | 137.6 | 142.3 | 147.0 | 151.6 |
| 22. | 55.6 | 70.4 | 75.2 | 80.0 | 84.7 | 89.5 | 94.3 | 99.1 | 103.8 | 108.6 | 113.4 | 118.2 | 123.0 | 127.7 | 132.5 | 137.3 | 142.1 | 146.8 | 151.6 | 156.4 |
| 23. | 68.3 | 73.2 | 78.1 | 83.0 | 87.8 | 92.7 | 97.6 | 102.5 | 107.4 | 112.3 | 117.2 | 122.1 | 127.0 | 131.8 | 136.7 | 141.6 | 146.5 | 151.4 | 156.3 | 161.2 |
| 24. | 71.0 | 76.0 | 81.0 | 86.0 | 91.0 | 96.0 | 101.0 | 106.0 | 111.0 | 116.0 | 121.0 | 126.0 | 131.0 | 136.0 | 141.0 | 146.0 | 151.0 | 156.0 | 161.0 | 166.0 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 11-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3..** | 15.6 | 18.4 | 21.2 | 24.0 | 26.7 | 29.5 | 32.3 | 35.1 | 37.8 | 40.6 | 43.4 | 46.2 | 49.0 | 51.7 | 54.5 | 57.3 | 60.1 | 62.8 | 65.6 | 68.4 |
| **4..** | 18.4 | 21.3 | 24.2 | 27.1 | 30.0 | 32.8 | 35.7 | 38.6 | 41.5 | 44.4 | 47.3 | 50.2 | 53.1 | 56.0 | 58.8 | 61.7 | 64.6 | 67.5 | 70.4 | 73.6 |
| 5.. | 21.2 | 24.2 | 27.2 | 30.2 | 33.2 | 36.2 | 39.2 | 42.2 | 45.2 | 48.2 | 51.2 | 54.2 | 57.2 | 60.2 | 63.2 | 66.2 | 69.2 | 72.2 | 75.2 | 78.2 |
| 6.. | 24.0 | 27.1 | 30.2 | 33.3 | 36.4 | 39.5 | 42.6 | 45.7 | 48.8 | 52.0 | 55.1 | 58.2 | 61.3 | 64.4 | 67.5 | 70.6 | 73.7 | 76.8 | 80.0 | 83.1 |
| 7.. | 26.7 | 30.0 | 33.2 | 36.4 | 39.6 | 42.8 | 46.1 | 49.3 | 52.5 | 55.7 | 59.0 | 62.2 | 65.4 | 68.6 | 71.8 | 75.1 | 78.3 | 81.5 | 84.7 | 88.0 |
| 8.. | 29.5 | 32.8 | 36.2 | 39.5 | 42.8 | 46.2 | 49.5 | 52.8 | 56.2 | 59.5 | 62.8 | 66.2 | 69.5 | 72.8 | 76.2 | 79.5 | 82.8 | 86.2 | 89.5 | 92.8 |
| 9.. | 32.3 | 35.7 | 39.2 | 42.6 | 46.1 | 49.5 | 53.0 | 56.4 | 59.8 | 63.3 | 66.7 | 70.2 | 73.6 | 77.1 | 80.5 | 84.0 | 87.4 | 90.8 | 94.3 | 96.7 |
| 10.. | 35.1 | 38.6 | 42.2 | 45.7 | 49.3 | 52.8 | 56.4 | 60.0 | 63.5 | 67.1 | 70.6 | 74.2 | 77.7 | 81.3 | 84.8 | 88.4 | 92.0 | 95.5 | 99.1 | 102.6 |
| 11.. | 37.8 | 41.5 | 45.2 | 48.8 | 52.5 | 56.2 | 59.8 | 63.5 | 67.2 | 70.8 | 74.5 | 78.2 | 81.8 | 85.5 | 89.2 | 92.8 | 96.5 | 100.2 | 103.8 | 107.5 |
| 12.. | 40.6 | 44.4 | 48.2 | 52.0 | 55.7 | 59.5 | 63.3 | 67.1 | 70.8 | 74.6 | 78.4 | 82.2 | 86.0 | 89.7 | 93.5 | 97.3 | 101.1 | 104.8 | 108.6 | 112.4 |
| 13.. | 43.4 | 47.3 | 51.2 | 55.1 | 59.0 | 62.8 | 66.7 | 70.6 | 74.5 | 78.4 | 82.3 | 86.2 | 90.1 | 94.0 | 97.8 | 101.7 | 105.6 | 109.5 | 113.4 | 117.3 |
| 14.. | 46.2 | 50.2 | 54.2 | 58.2 | 62.2 | 66.2 | 70.2 | 74.2 | 78.2 | 82.2 | 86.2 | 90.2 | 94.2 | 98.2 | 102.2 | 106.2 | 110.2 | 114.2 | 118.2 | 122.2 |
| 15.. | 49.0 | 53.1 | 57.2 | 61.3 | 65.4 | 69.5 | 73.6 | 77.7 | 81.8 | 86.0 | 90.1 | 94.2 | 98.3 | 102.4 | 106.5 | 110.6 | 114.7 | 118.8 | 123.0 | 127.1 |
| 16.. | 51.7 | 56.0 | 60.2 | 64.4 | 68.6 | 72.8 | 77.1 | 81.3 | 85.5 | 89.7 | 94.0 | 98.2 | 102.4 | 106.6 | 110.8 | 115.1 | 119.3 | 123.5 | 127.7 | 132.0 |
| 17.. | 54.5 | 58.8 | 63.2 | 67.5 | 71.8 | 76.2 | 80.5 | 84.8 | 89.2 | 93.5 | 97.8 | 102.2 | 106.5 | 110.8 | 115.2 | 119.5 | 123.8 | 128.2 | 132.5 | 136.8 |
| 18.. | 57.3 | 61.7 | 66.2 | 70.6 | 75.1 | 79.5 | 84.0 | 88.4 | 92.8 | 97.3 | 101.7 | 106.2 | 110.6 | 115.1 | 119.5 | 124.0 | 128.4 | 132.8 | 137.3 | 141.7 |
| 19.. | 60.1 | 64.6 | 69.2 | 73.7 | 78.3 | 82.8 | 87.4 | 92.0 | 96.5 | 101.1 | 105.6 | 110.2 | 114.7 | 119.3 | 123.8 | 128.4 | 133.0 | 137.5 | 142.1 | 146.6 |
| 20.. | 62.8 | 67.5 | 72.2 | 76.8 | 81.5 | 86.2 | 90.8 | 95.5 | 100.2 | 104.8 | 109.5 | 114.2 | 118.8 | 123.5 | 128.2 | 132.8 | 137.5 | 142.2 | 146.8 | 151.5 |
| 21.. | 65.6 | 70.4 | 75.2 | 80.0 | 84.7 | 89.5 | 94.3 | 99.1 | 103.8 | 108.6 | 113.4 | 118.2 | 123.0 | 127.7 | 132.5 | 137.3 | 142.1 | 146.8 | 151.6 | 156.4 |
| 22.. | 68.4 | 73.3 | 78.2 | 83.1 | 88.0 | 92.8 | 97.7 | 102.6 | 107.5 | 112.4 | 117.3 | 122.2 | 127.1 | 132.0 | 136.8 | 141.7 | 146.6 | 151.5 | 156.4 | 161.3 |

The amount indicated includes side walls and ceilings

# NUMBER OF SQUARE YARDS AND FEET IN ROOMS WITH 12-FOOT CEILINGS

| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3.** | 17.0 | 20.0 | 23.0 | 26.0 | 29.0 | 32.0 | 35.0 | 38.0 | 41.0 | 44.0 | 47.0 | 50.0 | 53.0 | 56.0 | 59.0 | 62.0 | 65.0 | 68.0 | 71.0 | 74.0 |
| **4.** | 20.0 | 23.1 | 26.2 | 29.3 | 32.4 | 35.5 | 38.6 | 41.7 | 44.8 | 48.0 | 51.1 | 54.2 | 57.3 | 60.4 | 63.5 | 66.6 | 69.7 | 72.8 | 76.0 | 79.1 |
| **5.** | 23.0 | 26.2 | 29.4 | 32.6 | 35.8 | 39.1 | 42.3 | 45.5 | 48.7 | 52.0 | 55.2 | 58.4 | 61.6 | 64.8 | 68.1 | 71.3 | 74.5 | 77.7 | 81.0 | 84.2 |
| **6.** | 26.0 | 29.3 | 32.6 | 36.0 | 39.3 | 42.6 | 46.0 | 49.3 | 52.6 | 56.0 | 59.3 | 62.6 | 66.0 | 69.3 | 72.6 | 76.0 | 79.3 | 82.6 | 86.0 | 89.3 |
| **7.** | 29.0 | 32.4 | 35.8 | 39.3 | 42.7 | 46.2 | 49.6 | 53.1 | 56.5 | 60.0 | 63.4 | 66.8 | 70.3 | 73.7 | 77.2 | 80.6 | 84.4 | 87.5 | 91.0 | 94.4 |
| **8.** | 32.0 | 35.5 | 39.1 | 42.6 | 46.2 | 49.7 | 53.3 | 56.8 | 60.4 | 64.0 | 67.5 | 71.1 | 74.6 | 78.2 | 81.7 | 85.3 | 88.8 | 92.4 | 96.0 | 99.5 |
| **9.** | 35.0 | 38.6 | 42.3 | 46.0 | 49.0 | 53.3 | 57.0 | 60.6 | 64.3 | 68.0 | 71.6 | 75.3 | 79.0 | 82.6 | 86.3 | 90.0 | 93.6 | 97.3 | 101.0 | 104.6 |
| **10.** | 38.0 | 41.7 | 45.5 | 49.3 | 53.0 | 56.8 | 60.6 | 64.4 | 68.2 | 72.0 | 75.7 | 79.5 | 83.3 | 87.1 | 90.8 | 94.6 | 98.4 | 102.2 | 106.0 | 109.7 |
| **11.** | 41.0 | 44.8 | 48.7 | 52.6 | 56.5 | 60.4 | 64.3 | 68.2 | 72.1 | 76.0 | 79.8 | 83.7 | 87.6 | 91.5 | 95.4 | 99.3 | 103.2 | 107.1 | 111.0 | 114.8 |
| **12.** | 44.0 | 48.0 | 52.0 | 56.0 | 60.0 | 64.0 | 68.0 | 72.0 | 76.0 | 80.0 | 84.0 | 88.0 | 92.0 | 96.0 | 100.0 | 104.0 | 108.0 | 112.0 | 116.0 | 120.0 |
| **13.** | 47.0 | 51.1 | 55.2 | 59.3 | 63.4 | 67.5 | 71.6 | 75.7 | 79.8 | 84.0 | 88.1 | 92.2 | 96.3 | 100.4 | 104.5 | 108.6 | 112.7 | 116.8 | 121.0 | 125.1 |
| **14.** | 50.0 | 54.2 | 58.4 | 62.6 | 66.8 | 71.1 | 75.3 | 79.5 | 83.7 | 88.0 | 92.2 | 96.4 | 100.6 | 104.8 | 109.1 | 113.3 | 117.5 | 121.7 | 126.0 | 130.2 |
| **15.** | 53.0 | 57.3 | 61.6 | 66.0 | 70.3 | 74.6 | 79.0 | 83.3 | 87.6 | 92.0 | 96.3 | 100.6 | 105.0 | 109.3 | 113.6 | 118.0 | 122.3 | 126.6 | 131.0 | 135.3 |
| **16.** | 56.0 | 60.4 | 64.8 | 69.3 | 73.7 | 78.2 | 82.6 | 87.1 | 91.5 | 96.0 | 100.4 | 104.8 | 109.3 | 113.7 | 118.2 | 122.6 | 127.1 | 131.5 | 136.0 | 140.4 |
| **17.** | 59.0 | 63.5 | 68.1 | 72.6 | 77.2 | 81.7 | 86.3 | 90.8 | 95.4 | 100.0 | 104.5 | 109.1 | 113.6 | 118.2 | 122.7 | 127.3 | 131.8 | 136.4 | 141.0 | 145.5 |
| **18.** | 62.0 | 66.6 | 71.3 | 76.0 | 80.6 | 85.3 | 90.0 | 94.6 | 99.3 | 104.0 | 108.6 | 113.3 | 118.0 | 122.6 | 127.3 | 132.0 | 136.6 | 141.3 | 146.0 | 150.6 |
| **19.** | 65.0 | 69.7 | 74.5 | 79.3 | 84.1 | 88.8 | 93.6 | 98.4 | 103.2 | 108.0 | 112.7 | 117.5 | 122.3 | 127.1 | 131.8 | 136.6 | 141.4 | 146.2 | 151.0 | 155.7 |
| **20.** | 68.0 | 72.8 | 77.7 | 82.6 | 87.5 | 92.4 | 97.3 | 102.2 | 107.1 | 112.0 | 116.8 | 121.7 | 126.6 | 131.5 | 136.4 | 141.3 | 146.2 | 151.1 | 156.0 | 160.8 |
| **21.** | 71.0 | 76.0 | 81.0 | 86.0 | 91.0 | 96.0 | 101.0 | 106.0 | 111.0 | 116.0 | 121.0 | 126.0 | 131.0 | 136.0 | 141.0 | 146.0 | 151.0 | 156.0 | 161.0 | 166.0 |
| **22.** | 74.0 | 79.1 | 84.2 | 89.3 | 94.4 | 99.5 | 104.6 | 109.7 | 114.8 | 120.0 | 125.1 | 130.2 | 135.3 | 140.4 | 145.5 | 150.6 | 155.7 | 160.8 | 166.0 | 171.1 |

The amount indicated includes side walls and ceilings

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